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March 1993

**United States Department of the Interior  
Bureau of Land Management**

*in cooperation with*

**United States Department of Agriculture  
U. S. Forest Service  
Pacific Southwest Research Station**

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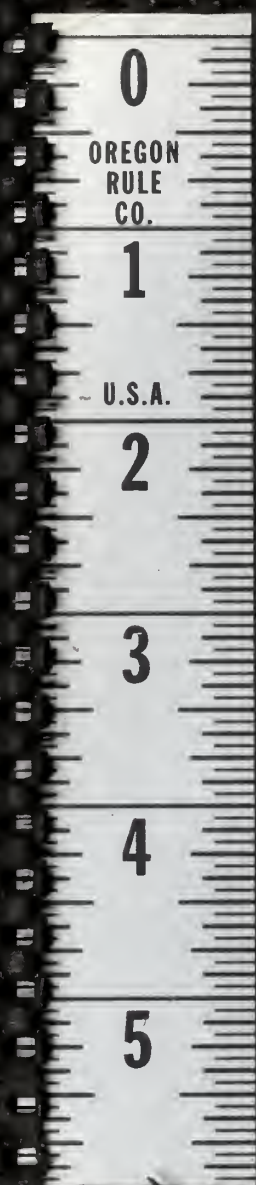


# Mecca Hills

## Visitor Research Case Study



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## Foreword

Public land and resource management agencies are experiencing increasing management challenges from changes in public land use patterns, the ethnic and cultural composition of public land visitors, and the land ethics, knowledge, and values which they bring to public lands. The comprehensive study of these factors and their implications for land management programs, is being addressed by the Bureau through a program of social research. This research program encompasses specific studies in cultural diversity, communications, urban/rural interface relationships and land ethics, with the comprehensive goal of developing new tools for management decision-making.

The products of this program include:

- The analysis and interpretation of visitor data and its application to the development of **management response options** at the local level.
- **Tools** for understanding changing visitation patterns and visitor behavior, attitudes and values and their implications for management.
- **Methods** for the collection of management change and visitor attitudinal data for specific field application.
- A **network** of cooperating agencies and institutions participating in management change research to increase the cost effectiveness of BLM social research activities.
- **Data** collection tools for gathering cultural diversity, management issue analysis and attitudinal data from public land visitors.

This "Case Study" represents the first in a series of reports which provide insight into specific management environments and the factors significant to an understanding of the expectations and demands of public land visitors in the West. The study describes the methods and results of a two year inventory of visitors in a wildland area in the desert lands east of Los Angeles, administered by the Bureau of Land Management. Emphasis has been placed on developing an understanding of use patterns, visitor behavior and preferences, recreational trends and the implications of these circumstances for management. The data resulting from this study has been applied to the development of specific management recommendations to increase the effectiveness and service delivery of the Bureau in the study area.

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# Visitor Research Case Study: Mecca Hills

## *Executive Summary*

Introduction: In 1991 a cooperative study was initiated by the Bureau of Land Management (BLM) and the Pacific Southwest Research Station (PSW) at the Mecca Hills recreation area. The purpose of this study was to describe visitors to the Mecca Hills area in terms of importance of and satisfaction with the area's features, socio- demographic characteristics, types of information used to learn about the area, activity patterns, and suggested improvements to the area. Results have helped better understand what kinds of people use the area and what they would like from management in terms of customer service. Results have been used to develop recommendations for information services, facility development, and other service delivery strategies. Results also may allude to the kinds of visitors and their expectations at other BLM sites experiencing change.

Sampling: Initial data collection occurred on two weekends in Spring, 1991 (Phase I). Data were collected on Easter and Mother's Day weekends from 250 visitors at two locations, the Painted Canyon area, and along Box Canyon road. Self-administered questionnaires were given to visitors for completion at the site. Versions were available in English or Spanish. The second phase of data collection occurred during winter and spring, 1991-92 (Phase II). During this phase a slightly modified survey was administered to 92 visitors during eight days.

Findings: Data from Phase I and Phase II give very different socio- demographic profiles of visitors to Mecca Hills. For race and ethnicity, for example, Phase I data suggest most visitors to Mecca Hills are Hispanic, while Phase II data suggest Mecca Hills visitors are mostly Anglos. Another example is language spoken. In Phase I, over one-third of the respondents reported Spanish as their primary language, while in Phase II only 1 in 10 reported Spanish as their primary language. Development of management implications are complicated by these findings.

Most visitors reported hiking as an activity in which they participate and many indicated non-strenuous activities as well (such as relaxing, picnicking, and visiting with others).

Most individuals first found out about Mecca Hills from informal sources such as word of mouth, family, and friends. Other sources included print media (newspapers, magazines, brochures, and maps). Though most reported they would prefer to get information about Mecca Hills through informal sources, over one-quarter would prefer print media. These sources may also be useful for providing information about how to care for the land.

Most of the sample said they never saw rangers. Ranger contacts were mostly for information with few contacts for law enforcement.

Knowledge of who manages Mecca Hills was low. While one-quarter of Phase II respondents correctly identified the BLM as the managing agency, about half at each phase had no idea who managed the area.

In general, respondents from both phases of the study rated all the site attributes as important and most reported they were satisfied with those attributes. Of most concern here is a category of statistically significant differences on site attributes that visitors considered important and yet were not as satisfied with--well-cared for facilities, signs, picnic area, garbage disposal, law enforcement, toilets, and clean, non-littered area.

About one-third of all respondents reported their recreational outing would be improved by some site development (such as adding telephones or restrooms). Other responses were spread among cleaning up the area, offering picnic tables and grills, having more rangers, or activity related facilities (such as swimming pools and hiking trails).

The following similarities were found among racial/ethnic groups: both groups indicated participation in strenuous and non-strenuous activities; both groups learned about Mecca Hills through informal sources (word of mouth, family, friends); both groups report a preference for information about Mecca Hills from informal sources as well as through print media; and most contacts with rangers were for information for both groups (although Hispanics in Phase I also indicated law enforcement contacts). The following were differences found between racial/ethnic groups: Hispanics from Phase I were more likely to engage in group sports; print media was used more by Anglo respondents to get information about Mecca Hills; Anglo respondents were less likely to see rangers; site attributes were rated as more important by Hispanic respondents.

**General Management Strategies:** Results offer managers some general strategies for service delivery. Managers may meet many visitor needs by having a greater presence on-site. This can be accomplished by having rangers more frequently visit the area, making more visitor contacts, passing out trash bags, and disseminating information about the area. This can also be accomplished through more signing (i.e., information about who to contact in case of emergency, and about hauling out trash) and by placing trash cans at popular areas. These findings also suggest if the BLM wants to contact users before they visit a site they will need to access the informal channels of communication used by them. Direct communication with agency personnel may be more important once visitors have found out about an area. If facility development is a feasible management option, then toilets and picnic tables could be added to the area. Managers may want to select a few popular areas for development, add facilities there, and then monitor their use.

Monitoring use levels in general is recommended. Use at Mecca seems to vary, with high use occurring during holiday weekends. Managers will need to determine if they will manage for holiday weekend use or traditional use. They will also need to determine if development, based on Hispanic visitor preferences, is appropriate.





## Visitor Research Case Study: Mecca Hills

### *Introduction*

This study was developed in response to Bureau of Land Management (BLM) concerns about how managers could respond to a rapidly changing management environment. Societal forces including urbanization, increased technology developments in recreation equipment, and an increasingly ethnically diverse population are changing the type of environment in which management decisions are made (Laidlaw 1991). These forces are responsible for increasing use of recreation areas by diverse cultural and recreation user groups. This emerging situation represents a challenge to managers who have been accustomed to providing more primitive, undeveloped types of recreation opportunities to a predominantly Anglo culture. Research is needed to better understand the changing environment that managers are experiencing.

Lands administered by the BLM in southern California exemplify a rapidly changing management environment. In 1990, BLM concerns about a changing management environment centered on a recreation site located in the California Desert District (please see Figure 1). Concerns about changing ethnic composition of area visitors and a perceived need for greater law enforcement at the recreation site were major precursors to this research. There were additional concerns about issues raised in the Mecca Hills Recreation Area Management Plan (RAMP). These included target shooting, vehicle use, vandalism, lack of available public information, wilderness management, motorized noncompetitive events, and unusual plant assemblages and sensitive species. Social scientists in the BLM and Forest Service thought that research focused on identifying site users would help resolve issues identified in the Mecca Hills RAMP. As part of a research agreement, the USDA Forest Service Pacific Southwest Research Station (PSW) decided to undertake research at Mecca Hills with the expectation that outcomes would benefit each agency. From the BLM perspective it was hoped that research would identify characteristics of a changing management environment that would address the site specific problems at Mecca Hills and might be useful for addressing problems in other BLM recreation areas. From the Forest Service perspective it was hoped that research would reveal effective visitor management strategies for dealing with ethnically diverse users; the mission statement of the recreation research unit at PSW.

The purpose of this study was to determine the usefulness of site specific, management driven research for addressing problems emerging in changing management environments. This was accomplished by investigating and describing recreation use at the Mecca Hills Recreation area. Specific study objectives are listed (next page).

### Study Objectives

1. Describe visitors to the Mecca Hills area in terms of socio-demographics (racial/ethnic group affiliation, languages spoken, gender, age, and education level), activities pursued, and how visitors learned to care for the land.
2. Describe visitor awareness of who manages the area, how they learned about the area, and their perceptions of BLM ranger presence at Mecca Hills.
3. Describe the importance of site attributes to visitors, their level of satisfaction associated with those attributes, and items that could be improved by recreation managers of the Mecca Hills area.
4. Determine if there are racial/ethnic group differences regarding activities pursued, communication channels, contacts with rangers, and importance of site attributes in the Mecca Hills area.

## *Methods*

### Study Setting

The Mecca Hills area is located in the Coachella Valley, less than an hour drive from Palm Springs (please see Figure 1), and is within a two hour drive of the Los Angeles metropolitan area. The area is comprised of open areas and numerous canyons. The area does not have any developed campsites--the nearest ones are about 50 miles away (Eslinger 1991). Off-highway vehicle (OHV) use is permitted over much of the area. Most recreation activity occurs in the Painted Canyon and along the Box Canyon road and the adjacent side canyons. Most use occurs from October to May, with peak use occurring on major holiday weekends (for example, Thanksgiving, Easter, and Mother's Day). However, there is local use year round.

### Study Approach

Data were collected using self-administered questionnaires. During weekends only, all visitors within the sampling area were approached by members of a bilingual research team and asked if they would complete a questionnaire about their recreation experience at Mecca Hills. If they consented, they were given a questionnaire. Participants could complete the survey in English or Spanish. The questionnaires were administered and collected on-site to minimize delays and nonresponse bias associated with mail back surveys. Time required to complete the surveys averaged 15 minutes. The research team was provided in cooperation with the Social Aspects of Resource Management Institute at California State Polytechnic University at Pomona.



Figure One. General Location of Study Area.



## Sampling

Visitors were sampled at the two major use areas, along Box Canyon Road and in the Painted Canyon area (please see Figure 2). These areas were sampled since they collectively represent the variety of day and overnight use that occurs in the Mecca Hills area. While data for Phase I were collected on holiday weekends only, Phase II visitors were contacted primarily on non-holiday weekends so that a more representative sample of visitors could be obtained.

## Survey Instrument

The survey instrument was developed in cooperation with the Social Aspects of Resource Management Institute at California State Polytechnic University at Pomona and BLM resource managers. The questionnaire contained 18 questions (please see Appendix A). These were used to collect basic, descriptive information on visitors that use the Mecca Hills Recreation Area. Questionnaire items about activities pursued, languages spoken, age, and their racial/ethnic group affiliation were used to address objective one:

**Describe visitors to the Mecca Hills area in terms of socio-demographics (racial/ethnic group affiliation, languages spoken, gender, age, and education level), activities pursued, and how visitors learned to care for the land.**

Questionnaire items about information sources visitors used, knowledge of who manages the area and presence of rangers in the area, were used to achieve objective two:

**Describe visitor awareness of who manages the area, how they learned about it, and their perceptions of BLM ranger presence at Mecca Hills.**

Questionnaire items about importance of site attributes and satisfaction with site attributes were used to achieve objective three:

**Describe the importance of site attributes to visitors, their level of satisfaction associated with those attributes, and items that could be improved by recreation managers of the Mecca Hills area.**

The questionnaire asking where visitors were born was used with the questionnaire identifying racial/ethnic group affiliation addresses objective four:

**Determine if there are racial/ethnic group differences regarding activities pursued, communication channels, contacts with rangers, and importance of site attributes in the Mecca Hills area.**



# Visitor Contact Areas

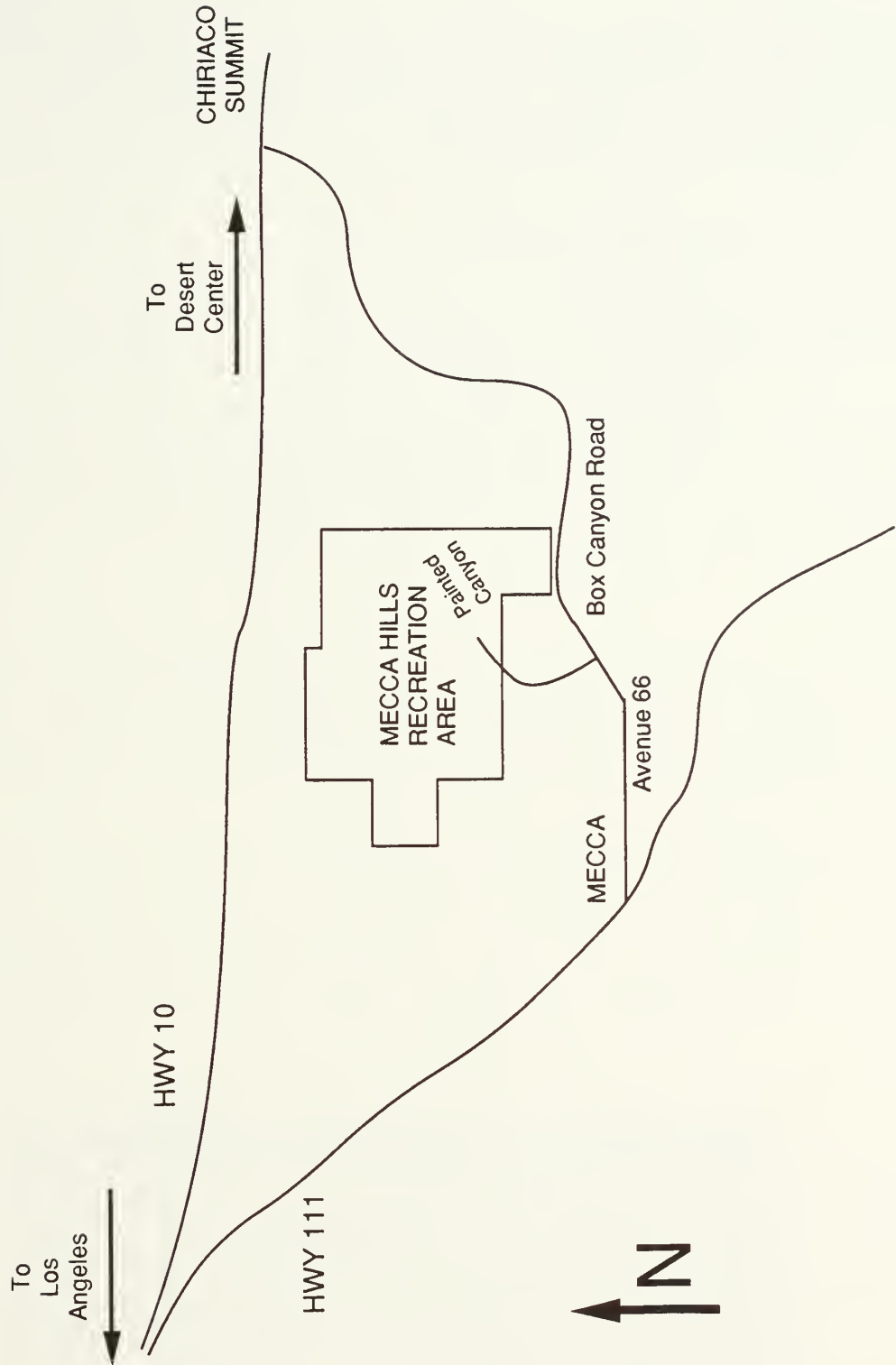


Figure Two. Visitor Contact Areas.

## Changes in Survey Instrument for Phase II

Several changes were made in the survey instrument for the second field season. The question about activity participation was given 10 fixed responses based on the 10 most frequently listed activities mentioned by respondents in the initial sample. A question about zip code of residence also was added. For the questions about information use, respondents could check only one response, whereas the initial sample gave multiple responses.

## Changes in the Field Setting During Phase I

On the first data collection weekend for Phase I the team encountered an unusual circumstance that may impact the results for the phase. Due to the expected high use of Mecca Hills for this holiday weekend (Easter), the resource managers provided extra law enforcement to the visitors. The personnel were from the BLM and County Sheriff's office and numbered 15. Officers were using various modes of transportation (quads, trucks, and horses) and were highly visible all weekend. The differences found between samples on seeing and contacts with rangers may be due to the increased law enforcement provided on this weekend. Similar law enforcement was not provided on Mother's Day.

## Data Analysis

Frequencies were generated for all variables and means were generated for interval type variables. T-tests determined if there were statistically significant differences between mean importance and mean satisfaction responses. Chi-square tests were used to determine differences in information sources used and the awareness of and interactions with BLM rangers.

Results for Objectives 1, 2, and 3 are for all respondents while Objective 4 results are comparisons of Anglo and Hispanic respondents only. Anglo and Hispanic groups were identified using responses to a question about ethnic group with which respondents most strongly identified (respondents who had identified themselves as African-American or "other" were excluded from the ethnic group analyses for both samples) in conjunction with birthplace of respondent. Chi-square tests were used for racial/ethnic group comparisons.



## *Results*

### **Objective One:**

**Describe visitors to the Mecca Hills area in terms of socio- demographics (racial/ethnic group affiliation, languages spoken, gender, age, and education level), activities pursued, and how visitors learned to care for the land.**

Tables 1 and 2 display a descriptive profile of visitors. In Phase I, the majority of the sample was male (54.0 percent). Anglo Americans comprised less than one-quarter of the sample (16.4 percent) while three-quarters (76.4 percent) described themselves as Hispanic. Most respondents spoke Spanish only (35.6 percent), and 29.2 percent spoke English only. On average, the respondents had completed some high school education (mean=10.3 years). The average age was about 33.

In Phase II, the majority of the sample was male (57.6 percent). Anglo Americans comprised more than half the sample (64.1 percent) while one-quarter (25.0 percent) described themselves as Hispanic. Most respondents spoke English only (69.6 percent), and 12.0 percent spoke Spanish only. On average, the respondents had completed a high school education (mean=12.6 years). The average age was about 44.

Table 1. General Visitor Characteristics

	Phase I	Phase II
<u>Racial/Ethnic Group</u>	<u>Percent</u>	<u>Percent</u>
Hispanic	76.4	25.0
Anglo	16.4	64.1
Other	1.6	10.9
Missing	5.6	0.0
	n=250	n=92
<u>Languages Spoken</u>		
Spanish	35.6	12.0
English	29.2	69.6
Both	31.6	17.4
Other	2.8	1.0
Missing	0.8	0.0
	n=250	n=92
<u>Gender</u>		
Male	54.0	57.6
Female	44.8	39.1
Missing	1.2	3.2
	n=250	n=92

Table 2. Visitor Age and Education

	Phase I				Phase II			
	<u>Mean</u>	<u>(SD)</u>	<u>Range</u>	<u>n</u>	<u>Mean</u>	<u>(SD)</u>	<u>Range</u>	<u>n</u>
Age	32.6	13.1	11-75	234	43.6	16.9	14-86	90
Education	10.3	7.0	1-20	236	12.6	4.2	1-20	90

SD=Standard deviation

Table 3 reports how individuals learned to care for the land. Respondents could indicate more than one source. Due to large numbers of missing data, only items ranked first are reported here. Most respondents in Phase I and Phase II learned to care for the land from informal sources such as family and friends. Formal sources (including broadcast and print media) were another important source of information. The remainder learned to care for the land from government, church, or other sources (school, Bible, common sense).

Table 3. How Respondent Learned To Care For The Land\*

	Phase I	Phase II
	<u>Percent</u>	<u>Percent</u>
Family	63.6	45.7
Friends	8.0	7.6
Literature	3.6	8.5
TV/radio/movies	3.6	5.4
Government	4.8	5.4
Church	4.8	4.3
Other sources	4.4	9.8
Missing	7.2	13.3
	n=250	n=92

\*Interpret this table with caution due to a large amount of missing data.

Table 4 shows that activity profiles also differed between samples. The most frequently mentioned activities for Phase I were group sports followed by hiking, picnicking, relaxing, OHV riding, and camping. In contrast, for Phase II the most frequently mentioned activity was hiking, followed by relaxing, picnicking, visiting with others, camping, and photography. Group sports was the eighth most frequently mentioned activity at Phase II.

At phase I respondents were asked to list five activities that they liked to do at the site, at phase II respondents were given a list of activities to respond to. The changes in the question help explain the vast differences in response patterns--especially the lack of a clear pattern within any one activity category.

Table 4. Most Frequently Mentioned Activities\*

	Percent of Times Activity Was Mentioned*	
<u>Activity</u>	<u>Phase I</u>	<u>Phase II</u>
Group Sports**	56.8	23.9
Hiking	48.8	92.4
Picnicking	40.8	82.6
Relaxing	33.2	84.8
OHV riding	27.6	31.5
Camping	22.8	70.6
Visiting with others	13.6	78.3
Photography	4.8	57.6
Studying geology of area	0.0	46.7
Horseback riding	0.8	14.1
	n=250	n=92

\* Percents do not sum to 100 since multiple responses were permitted.

\*\* Group sports represent combined categories of sports such as baseball, soccer, football, and volleyball.



## Objective Two:

**Describe visitor awareness of who manages the area, how they learned about it, and their perceptions of BLM ranger presence at Mecca Hills.**

Tables 5 and 6 show how the respondents found out about Mecca Hills and their preferences for information about Mecca Hills. Most individuals from both Phase I and Phase II first found out about Mecca Hills from informal sources such as word of mouth, family, and friends. Other sources were more formal such as print media (newspapers, magazines, brochures, and maps) and broadcast media (television, radio). Preferred sources of information about Mecca Hills were informal sources, print media, and broadcast media.

Table 5. How Visitor Found Out About Area

<u>Source</u>	Phase I*	Phase II
	<u>Percent</u>	<u>Percent</u>
Informal sources	70.8	66.3
Print media	3.2	18.5
Self discovery	10.8	12.0
Broadcast media	26.8	0.0
Agency information	0.0	0.0
Other sources	8.8	3.2
		n=92

\* In the first phase respondents were able to check all sources that applied. In the second phase they were instructed to check only one response.

Table 6. How Visitor Would Find Information About Area

<u>Source</u>	Phase I	Phase II
	<u>Percent</u>	<u>Percent</u>
Informal sources	32.0	39.1
Print media**	35.2	26.1
Self discovery	3.8	0.0
Broadcast Media***	26.8	4.3
Agency	10.4	15.2
Other sources	1.6	1.1
Missing	na *	14.1
		n=92

\* In the first phase respondents were able to check all sources that applied. In the second phase they were instructed to check only one response.

\*\* e.g., flyers

\*\*\* e.g., TV

Tables 7 and 8 display responses to questions about how often visitors saw rangers and types of ranger contacts. About one-third (30.8 percent) of those in Phase I said they never or seldom saw rangers. About 40% of the Phase II sample said they never saw rangers. The nature of interaction with rangers also differed. Most contacts for Phase I sample were for law enforcement (21.1 percent) while most contacts for Phase II sample were for information purposes (29.4 percent).

Table 7. Visitor Responses To How Often Rangers Were Seen

<u>Frequency</u>	Phase I <u>Percent</u>	Phase II <u>Percent</u>
Never	16.8	42.4
Seldom	14.0	26.1
Sometimes	33.2	15.2
Often	19.6	12.0
Always	11.2	2.1
Missing	5.2	2.1
	n=250	n=92

Table 8. How Visitors Dealt With Area Rangers

<u>Mode of Interaction</u>	Phase I <u>Percent</u>	Phase II <u>Percent</u>
Law enforcement	21.2	2.2
Information	16.8	29.4
Assistance	8.8	6.5
Interpretation	3.2	5.4
Conversation	0.0	2.2
Other	6.8	1.1
More than one type	20.4	13.0
Missing, no ranger seen	22.8	40.2
	n=250	n=92

Table 9 displays the proportion of law enforcement and other ranger contacts by OHV riders and nonriders. Statistically significant differences ( $p < 0.05$ ) were not found for either sample.

Table 9. Law Enforcement Contacts by OHV Riders and Nonriders

<u>Type of Interaction</u>	Phase I		Phase II	
	Riders	Nonriders	Riders	Nonriders
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Law enforcement	10.4	17.1	4.3	0.0



Knowledge of who manages Mecca Hills was low for both samples. Table 10 shows that 8% of the Phase I sample correctly identified the BLM as the managing agency and that about 50 percent said they did not know who managed Mecca. The same table shows that 25.0 percent of the Phase II sample correctly identified the BLM and another 46 percent did not know who managed the area.

Table 10. Recognition of Managing Agency

<u>Agency Cited</u>	Phase I	Phase II
	<u>Percent</u>	<u>Percent</u>
Unknown	49.6	46.7
County	14.4	6.5
BLM	8.8	25.0
Forest Service	8.8	1.1
Park Service	5.6	5.4
Private	1.2	0.0
Unmanaged	3.2	5.4
Missing	8.4	9.8
	n=250	n=92

### Objective Three:

**Describe the importance of site attributes to visitors, their level of satisfaction associated with those attributes, and items that could be improved by recreation managers of the Mecca Hills area.**

Table 11 displays importance and satisfaction ratings for seventeen site attributes. In Phase I eleven statistically significant differences ( $p < 0.05$ ) were found which can be described within two categories: (1) items scoring much higher in importance than in satisfaction; and (2) items scoring somewhat higher in importance than in satisfaction.

Six site attributes were identified that respondents rated as important but were not very satisfied with which included these: well-cared for facilities, signs, picnic area, garbage disposal, law enforcement, and toilets. Five site attributes were somewhat higher in importance than satisfaction though, satisfaction was 3.5 or higher and included these: safe area, clean-non-littered area, friendly, informative rangers, trails, and low cost recreation area.

Table 11. Visitor Responses to Importance/Satisfaction Items-Phase I

Site Attribute	Importance			Satisfaction			Significant Difference
	Mean	(S.D.)	n	Mean	(S.D.)	n	
Safe area	4.6	(0.9)	238	4.0	(1.2)	233	(.000)
Clean, non-littered area	4.6	(0.8)	235	3.7	(1.4)	230	(.000)
Friendly, informative rangers	4.3	(1.2)	229	3.8	(1.4)	224	(.000)
Well-cared for facilities	4.0	(1.3)	226	3.4	(1.5)	221	(.000)
Trails	4.1	(1.2)	228	3.6	(1.4)	222	(.000)
Garbage disposal	4.1	(1.4)	226	3.0	(1.8)	223	(.000)
Toilets	4.1	(1.4)	228	2.8	(1.8)	224	(.000)
Law enforcement	4.0	(1.4)	228	3.5	(1.5)	219	(.003)
Low cost recreation area	4.2	(1.2)	228	3.8	(1.7)	243	(.006)
Picnic area	3.9	(1.4)	232	3.4	(1.6)	222	(.007)
Signs	3.7	(1.5)	224	3.4	(1.6)	219	(.035)
Beautiful area	4.5	(0.9)	232	4.4	(1.0)	233	NS
Place to recreate with family	4.5	(0.9)	236	4.3	(1.0)	227	NS
Free of rules and regulations	4.0	(1.2)	229	3.9	(1.2)	225	NS
Place easy to get to	4.1	(1.1)	153	4.3	(0.9)	158	NS
Place to use equipment	4.1	(1.2)	227	4.0	(1.3)	226	NS
Parking spaces	3.6	(1.6)	228	3.7	(1.5)	225	NS

Mean: Based on a 1-5 scale with 1 = not important or not satisfied at all and 5 = very important or very well satisfied.

S.D.: Standard deviation is in parentheses.



Table 12 displays importance and satisfaction ratings for seventeen site attributes. In Phase II eight statistically significant differences ( $p < 0.05$ ) were found which can be described within three categories: (1) items scoring higher in importance than in satisfaction which included these: clean, non-littered area and garbage disposal; (2) items scoring higher in satisfaction than in importance which included these: parking spaces, signs, and picnic area.; and (3) items scoring high in importance and satisfaction which included these: trails, law enforcement, and low cost area.

Table 12. Visitor Responses to Importance/Satisfaction Items-Phase II

<u>Site Attribute</u>	<u>Importance</u>			<u>Satisfaction</u>			<u>Significant Difference</u>
	<u>Mean(S.D)</u>	<u>n</u>		<u>Mean(S.D)</u>	<u>n</u>		
Clean, non-littered area	4.6 (0.6)	92		3.8 (1.1)	91		(0.000)
Parking spaces	2.8 (1.4)	90		3.7 (1.3)	90		(0.000)
Picnic area	2.7 (1.5)	90		3.7 (1.2)	87		(0.000)
Low cost recreation area	3.8 (1.3)	92		4.4 (1.1)	88		(0.001)
Law enforcement	3.2 (1.2)	92		3.4 (1.1)	84		(0.003)
Garbage disposal	3.5 (1.5)	92		2.8 (1.4)	84		(0.008)
Trails	3.5 (1.2)	92		3.6 (1.4)	89		(0.012)
Signs	2.9 (1.3)	89		3.4 (1.3)	90		(0.035)
Safe area	4.1 (1.0)	92		4.0 (0.8)	91		NS
Beautiful area	4.3 (0.7)	91		4.4 (0.8)	89		NS
Place to recreate with family	4.3 (0.9)	91		4.2 (0.9)	88		NS
Free of rules and regulations	3.8 (1.2)	91		4.0 (1.1)	88		NS
Place easy to get to	3.2 (1.4)	92		3.3 (1.3)	86		NS
Friendly, informative rangers	3.6 (1.3)	91		3.6 (1.3)	82		NS
Place to use equipment	3.7 (1.4)	90		4.0 (1.1)	82		NS
Well-cared for facilities	3.2 (1.4)	92		3.3 (1.3)	86		NS
Toilets	3.0 (1.5)	92		2.8 (1.5)	84		NS

Mean: Based on 1-5 scale with 1 = not important or not satisfied at all and 5 = very important or very well satisfied.

SD: Standard deviation is in parentheses.

Respondents were asked to list up to 5 items that would make their recreational outing more enjoyable. Due to a large number of missing responses, Table 13 reports first response only. Over one-third of respondents from each phase reported their recreational outing would be improved by some site development (such as adding telephones, electrical outlets, grass, water or restrooms). Other responses were spread among cleaning up the area, offering picnic tables and grills, having more rangers, or adding activity related facilities (such as swimming pool, off-road trails, and hiking trails).

Table 13. Items to Make Recreational Outing More Enjoyable

<u>Item</u>	Phase I <u>Percent</u>	Phase II <u>Percent</u>
Develop area more	45.6	35.9
Clean up area	10.4	8.7
Provide eating facilities	6.0	7.6
Increase law enforcement/ management restrictions	7.6	7.6
Build activity related facilities	3.6	6.5
Other suggestions	4.8	10.9
Missing	22.0	22.8
	n=250	n=92



#### **Objective Four:**

**Determine if there are racial/ethnic group differences regarding activities pursued, communication channels, contacts with rangers, and importance of site attributes in the Mecca Hills area.**

Analyses of racial/ethnic group differences are based on a created variable. This variable is the combination of two variables from the questionnaire--one asks for cultural group affiliation and the other is place of birth. The combination of the two variables for the analyses resulted in somewhat smaller sample sizes than found in other analyses because missing data from one or the other variable would cause the case to be dropped from analysis.

Table 14 shows differences in activity participation by racial/ethnic groups. Caution should be exercised in interpreting this table. In Phase I multiple responses were encouraged and were open-ended while in Phase II a list of activities were provided and respondents were able to rank them. The changes in question wording may help explain the differences found between phases.

In Phase I Hispanic respondents reported the most participation in these activities: group sports, picnicking, hiking/walking, relaxing and OHV riding. Anglo respondents reported the most participation in OHV riding, camping, hiking/walking, relaxing and camping.

In Phase II the Hispanic respondents reported the most participation in picnicking, visiting with others, hiking/walking, and camping while Anglo respondents reported the most participation in hiking/walking, relaxing, visiting with others, and picnicking.

Table 14. Recreational Activity Participation by Racial/Ethnic Group\*

<u>Activity</u>	Phase I		Phase II**	
	Anglos <u>Percent</u>	Hispanics <u>Percent</u>	Anglos <u>Percent</u>	Hispanics <u>Percent</u>
Group sports	9.8	56.2	13.6	52.2
Hiking/walking	63.4	34.6	94.9	82.6
Picnicking	9.8	39.5	74.6	95.6
Relaxing	31.7	26.5	91.5	65.2
OHV riding	34.1	23.8	33.9	30.4
Camping	31.7	16.8	72.9	72.9
Target shooting	19.5	4.3	0.0	0.0
Photography	12.2	3.2	66.1	47.8
Horseback riding	2.4	0.0	8.5	21.7
Visiting	0.0	11.9	78.0	87.0
	n=41	n=185		

\* Only selected categories are compared in Phases I and II thus Phase I percentages do not equal 100.

\*\* For Phase II analyses each activity was a separate variable thus 13.6 of the 59 Anglo respondents reported that they participate in group sports.

Table 15 reports how the racial/ethnic groups found out about Mecca Hills. For both phases, 8 in 10 Hispanic respondents reported finding out about Mecca Hills through informal sources (such as word of mouth, family, and friends) as did 6 in 10 Anglo respondents. Both phases also suggest that self-discovery was an important mechanism while print media (newspapers, magazines, brochures, maps, and library) in Phase II was an important resource for Anglo visitors.

Table 15. How Respondent Learned About Area by Racial/Ethnic Group \*

<u>Information Source</u>	Phase I		Phase II	
	Anglos <u>Percent</u>	Hispanics <u>Percent</u>	Anglos <u>Percent</u>	Hispanics <u>Percent</u>
Informal sources	64.5	81.3	59.3	82.6
Print media	6.5	2.5	27.1	4.3
Broadcast media	0.0	0.6	0.0	0.0
Self-discovery	16.1	8.1	10.2	8.7
Other	12.9	7.5	3.4	4.3
			n=59	n=23

\* Percentages in Phase I represent % in each category of response. Percentages in Phase II represent % of respondents. Therefore, percentages in phase I do not sum to 100 since multiple responses were permitted, and not everyone may have responded.

Table 16 shows how groups from both phases prefer to receive information about the Mecca Hills area. In general, respondents showed a preference for informal sources (word of mouth, asking locals) and print media (including newspapers, magazines, and brochures). Many in Phase I and to a lesser extent in Phase 2, also mentioned agency sources (such as ranger contacts).

Table 16. Preferences for Information by Racial/Ethnic Group \*

<u>Information source</u>	Phase I		Phase II	
	Anglos <u>Percent</u>	Hispanics <u>Percent</u>	Anglos <u>Percent</u>	Hispanics <u>Percent</u>
Informal sources	36.4	30.1	39.0	26.1
Print media	30.3	34.4	23.7	39.1
Agency information	30.3	29.4	15.3	13.0
Broadcast media	0.0	0.0	1.7	13.0
Other	3.0	6.1	1.7	0.0
Missing	**	**	18.6	8.7
			n=59	n=23

\* Percentages in Phase I represent percent of each type of response. Percentages in Phase II represent total percent of respondents. Therefore, percentages in Phase I do not equal 100 since multiple responses were permitted and not everyone may have responded.

\*\* Not applicable to Phase I.



Table 17 reports a comparison of frequency of seeing rangers by racial/ethnic group. Analyses of both phases indicates that Anglo respondents were less likely to see rangers at Mecca Hills.

Table 17. Frequency of Seeing Rangers by Ethnic/Racial Groups \*

<u>Frequency</u>	Phase I		Phase II	
	Anglos	Hispanics	Anglos	Hispanics
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Never	30.3	13.1	49.1	26.1
Seldom	30.3	8.5	30.5	13.0
Sometimes	21.2	39.2	8.5	30.4
Often	12.1	22.9	8.5	26.1
Always	3.0	13.7	1.7	4.3
Missing	3.0	2.6	1.7	0.0
	n=33	n=153	n=59	n=23

\* The Chi-square statistic is inappropriate for Phase I due to a large amount of missing data. The Chi-square statistic for Phase II is significant at  $p=0.037$ .

Table 18 reports responses for the types of contacts the groups had with BLM rangers at Mecca Hills. In Phase I Hispanics reported law enforcement and information as the most common reason for contacts with rangers while Anglo respondents reported information as the most common reason for contact. In Phase II Anglo respondents reported information as the most common reason for contacts with rangers as did Hispanic respondents. Hispanic respondents also reported contacts for interpretation and assistance.

Table 18. Comparison of Contacts With Rangers by Racial/Ethnic Group\*

<u>Type of Contact</u>	Phase I		Phase II	
	Anglos	Hispanics	Anglos	Hispanics
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Information	12.2	15.7	30.5	26.1
Law enforcement	9.8	20.5	3.4	0.0
Interpretation	2.4	2.2	1.7	17.4
Assistance	2.4	7.6	0.0	17.4
Conversation	0.0	0.0	3.4	0.0
Multiple ways	16.8	17.1	11.9	17.4
Other	19.5	1.6	1.7	0.0
Missing	36.6	36.2	47.4	21.7
	n=41	n=185	n=59	n=23

\* Interpret with caution due to a large amount of missing data.

Table 19 shows statistically significant differences on importance of site attributes between Anglo and Hispanic respondents for Phase I. Statistically significant differences were found for 15 of the 17 site items. Hispanic respondents gave higher mean responses than Anglos to each of the 15 site attributes which included these: law enforcement, free of rules and regulations, friendly, informative rangers, place to recreate with family, well cared for facilities, parking spaces, signs, picnic area, trails, garbage disposal, toilets, a safe area, place easy to get to, low cost recreation area, and place to use equipment.

Table 19. Importance of Site Attributes by Racial/Ethnic Group - Phase I

<u>Item</u>	<u>Anglos</u>			<u>Hispanics</u>			<u>Stat'l Signif</u>
	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	
Law enforcement	3.15	1.60	33	4.25	1.23	138	(0.000)
Free of rules and regulations	3.27	1.48	33	4.14	1.18	140	(0.000)
Friendly, informative rangers	3.42	1.58	33	4.42	1.02	137	(0.000)
Place to recreate w/family	4.00	1.35	33	4.60	.73	143	(0.000)
Well cared for facilities	3.00	1.41	33	4.31	1.04	137	(0.000)
Parking spaces	2.15	1.48	33	3.91	1.44	138	(0.000)
Signs	2.33	1.48	33	4.10	1.26	136	(0.000)
Picnic area	2.52	1.52	33	4.31	1.13	140	(0.000)
Trails	3.42	1.39	33	4.35	1.04	137	(0.000)
Garbage disposal	3.33	1.59	33	4.42	1.18	137	(0.000)
Toilets	3.03	1.61	33	4.45	1.16	138	(0.000)
A safe area	4.18	1.16	33	4.68	.73	144	(0.002)
Place easy to get to	3.50	1.27	33	4.19	1.05	81	(0.004)
Low cost recreation area	3.70	1.29	33	4.33	1.12	138	(0.005)
Place to use equipment	3.85	1.48	33	4.39	.90	137	(0.008)
Clean, nonlittered area	4.57	.94	33	4.69	.70	141	NS
Beautiful area	4.52	1.12	33	4.52	.86	141	NS



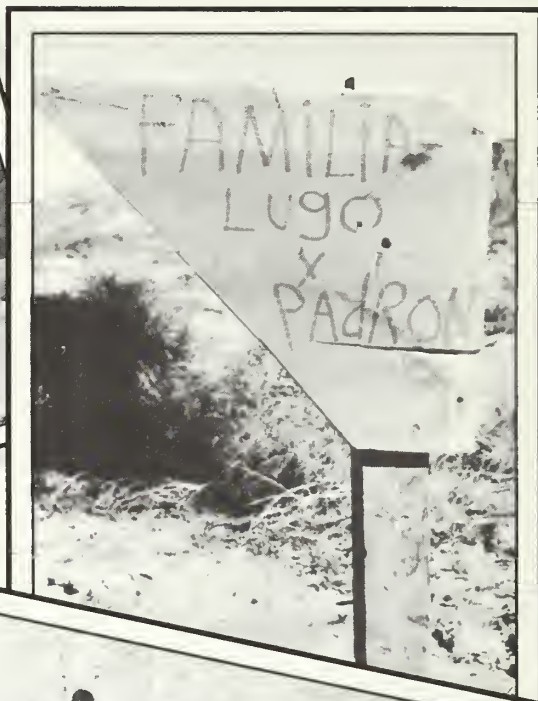
Table 20 shows statistically significant differences on importance of site attributes between Anglo and Hispanic respondents. Statistically significant differences were found for 10 of the 17 site items. Hispanic respondents gave higher mean responses than Anglos to these site attributes: well cared for facilities, picnic areas, parking spaces, place to use equipment, disposal of garbage, toilets, signs, trails, law enforcement, and friendly, informative rangers.

Table 20. Importance of Site Attributes by Racial/Ethnic Group- Phase II

<u>Item</u>	<u>Anglos</u>			<u>Hispanics</u>			<u>Stat'l Signif</u>
	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	
Well cared for facilities	2.81	1.37	59	4.26	.91	23	(0.000)
Picnic area	2.24	1.37	58	3.74	1.14	23	(0.000)
Parking spaces	2.57	1.40	58	3.77	1.19	22	(0.001)
Place to use equipment	3.50	1.44	58	4.36	.95	22	(0.003)
Signs	2.55	1.31	58	3.54	1.02	22	(0.003)
Garbage disposal	3.13	1.57	59	4.22	1.00	23	(0.003)
Toilets	2.68	1.41	59	3.78	1.41	23	(0.003)
Trails	3.41	1.20	58	4.13	.87	23	(0.004)
Law enforcement	2.94	1.39	59	3.87	1.14	23	(0.006)
Friendly, informative rangers	3.41	1.23	58	4.17	1.15	23	(0.010)
Clean, nonlittered area	4.63	.52	59	4.50	.66	23	NS
Beautiful area	4.33	.76	59	4.36	.66	22	NS
A safe area	4.01	1.09	59	4.61	.50	23	NS
Free of rules and regulations	3.79	1.17	58	3.61	1.37	23	NS
Place to recreate w/family	4.23	1.00	59	4.36	.66	22	NS
Place easy to get to	3.60	1.03	58	3.83	1.11	23	NS
Low cost recreation area	4.00	1.20	59	3.74	1.57	23	NS









## ***Discussion and Management Implications***

This study sought to describe visitors at Mecca Hills in terms of socio-demographic characteristics, in terms of use of information sources relative to their recreation use at Mecca, importance and satisfaction issues, awareness of the presence of BLM rangers, and possible racial/ethnic group differences regarding the above characteristics. While the first phase of studies at Mecca Hills concentrated on holiday use, the second phase focused on collecting visitor information on non-holidays to provide a more complete picture of Mecca Hills visitor use. There were four main objectives to the study and each will be examined.

### **Objective One:**

**Describe visitors to the Mecca Hills area in terms of socio-demographics (racial/ethnic group affiliation, languages spoken, gender, age, and education level), activities pursued, and how visitors learned to care for the land.**

In Phase I data were collected on high use days while in Phase II there were several data collection days where use was extremely low (due in part to poor weather conditions) and other days getting light to moderate use. More frequent monitoring of use is needed to accurately estimate use at Mecca Hills. From this data it is difficult to estimate use levels accurately.

Data from Phase I and Phase II give very different socio-demographic profiles of visitors to Mecca Hills. For race and ethnicity, for example, Phase I data (primarily based on data collected during holiday weekends) suggests most visitors to Mecca Hills are Hispanic, while Phase II (primarily based on data collected on non-holiday weekends) suggests Mecca Hills visitors are mostly Anglos. Another example is language spoken. In Phase I, over one-third of the respondents reported Spanish as their primary language, while in Phase II only 1 in 10 reported Spanish as their primary language. Development of management implications are complicated by these findings. Based on differences found in these data sets it seems as if the resource managers will need to decide if they want to manage for holiday use or manage for traditional use.

Understanding how respondents learned to care for the land is complicated by a large amount of missing data. To the extent that we can rely on this data, it looks as if there is room for the managing agency to provide information on caring for natural resources. Most respondents from Phase I and Phase II learned to care for the land from informal sources such as family and friends and relied less on formal sources such as print media, broadcast media, and government agencies. The data indicate some need for focus in this area by the agency. What that focus will be is complicated by the diversity found in samples such that Phase I data would indicate a need for printed and broadcast information in Spanish language in addition to English while Phase II indicates most emphasis is needed for English language information.

The data indicate that visitors prefer a mixture of physical and non-physical activities. Most visitors reported hiking as an activity in which they participate and many indicated non-strenuous activities as well (such as relaxing, picnicking, and visiting with others). Mecca Hills seems to offer many choices to the visitors. The biggest difference, which may again be related to socio-demographic characteristics, was the reporting of group activities. Four in ten respondents in Phase I reported group sport activities while two in ten in Phase II did. Since more people were found on site during holiday weekends, and more people are needed to play group sports, this was not a surprising finding. The use of the land for group sport games (such as volleyball and soccer) may not be what resource managers expect.

### **Objective Two:**

**Describe visitor awareness of who manages the area, how they learned about it, and their perceptions of BLM ranger presence at Mecca Hills.**

While most individuals first found out about Mecca Hills from informal sources, print and broadcast media were another important source of information. Preferences for information about Mecca Hills follow the same pattern--most would prefer informal sources yet print and broadcast media will play an important role too. Managers ought to give more credence to what people actually use than to what they say they may prefer because a stated preference for something does not necessarily mean people will actually use it. The agency has an opportunity to offer some information to visitors in either broadcast or print form and may want to consider using English and Spanish. This case study did not examine specific avenues for the dispersal of information so it cannot determine which broadcast media or print media to use. However, some resource material (brochures, for example) can be printed to have available for visitors. Rangers might consider taking such material with them and dispersing it during all routine contacts with visitors.

Thirty percent or more of the visitors said they saw never saw rangers. Phase I respondents who had contacts reported contacts mostly for law enforcement--which is partially due to the increased presence of law enforcement personnel during Easter weekend. In Phase II most contacts were made were for information. The managing agency has an opportunity to make their presence known--more contacts could be made with visitors. This will partially depend on funding for additional personnel and is partially dependent upon current staff to make more casual contacts with visitors. Again, during casual contacts the rangers could share information about Mecca Hills with the visitors.

Knowledge of who manages Mecca Hills was low. Less than 10 percent in Phase I and one-quarter of the respondents in Phase II correctly identified the BLM as the managing agency. About half of each sample had no idea who managed the area. Again, there is room for the BLM to create a positive image for themselves. This could be as inexpensive as getting more signs up that identify BLM as the managing agency.

### **Objective Three:**

**Describe the importance of site attributes to visitors, their level of satisfaction associated with those attributes, and items that could be improved by recreation managers of the Mecca Hills area.**

In general, respondents from both phases of the study rated all the site attributes as important and most reported they were satisfied with those attributes. Of most concern here is a category of statistically significant differences on site attributes that visitors considered important and yet were not as satisfied with--well-cared for facilities, signs, picnic area, garbage disposal, law enforcement, toilets, and clean, non-littered area. In particular, the focus needs to be on garbage disposal as data from both phases indicates this as a potential problem area. The data suggest that the resource managers ought to consider making trash cans available to visitors--which would increase costs in the area since that would require staff to empty and dump the trash collected. Another option would be to invite visitors to trash-pickup "parties" led by resource managers.

About ten percent from each sample also indicated that a clean area would make their outing more enjoyable. About three in 10 respondents from each sample indicated that developing the site (by adding telephones, electrical outlets, grass, water, or restrooms) would make their outing more enjoyable. Other responses were spread among cleaning up the area, offering picnic tables and grills, having more rangers, or activity related facilities (such as swimming pool, off-road trails, and hiking trails). Development of the area would need to be studied further before a strong recommendation could be made to add site amenities.

### **Objective Four:**

**Determine if there are racial/ethnic group differences regarding activities pursued, communication channels, contacts with rangers, and importance of site attributes in the Mecca Hills area.**

The following similarities were found among racial/ethnic groups: both groups indicated participation in strenuous and non-strenuous activities; both groups learned about Mecca Hills through informal sources (word of mouth, family, friends); both groups report a preference for information about Mecca Hills from informal sources as well as through print media; and most contacts with rangers were for information for both groups (although Hispanics in Phase I also indicated law enforcement contacts).

The following were differences found between racial/ethnic groups: Hispanics from Phase I sample were more likely to engage in group sports; print media was used more by Anglo respondents to get information about Mecca Hills; Anglo respondents were less likely to see rangers; site attributes were rated as more important by Hispanic respondents.



The differences cited above suggest a couple of issues for Mecca Hills resource managers to consider. One item is for getting print media to Hispanic respondents--particularly those whose primary language is Spanish--suggests a potential need for information in multiple languages. Another difference of note is the clear preference by Hispanic respondents for site amenities. This suggests that development of the area would be most appreciated by Hispanic visitors.

Finally, more frequent monitoring of use should be conducted to determine use levels and ethnic composition of the area's visitors. Intensity of development could be guided by determining the overall proportion of Hispanics who use the area, given that development seems to be of greater importance to Hispanics than Anglos.

#### Management Actions Undertaken Since Research Pilot

Several management actions have been undertaken since the pilot study was implemented. Bilingual signs have been placed along the Box Canyon and Painted Canyon roads. Law enforcement personnel were trained in Spanish to improve communication with visitors, many of whom do not speak English. Public service announcements were developed in Spanish and broadcast on a Spanish speaking radio station in the Coachella Valley.

#### Comparability With Other Recreation Studies

Results from this study more closely conform to those from studies of Anglo and Hispanic visitor differences conducted on national forest lands than to a recent study at the Imperial Sand Dunes (another BLM site). Studies of Anglo and Hispanic visitors on the Angeles and San Bernardino national forests (Baas and Chavez 1992), the Angeles (Simcox and Pfister 1990), the Lincoln (Irwin et al. 1991), and on the Tonto national forest (Gramann and Floyd 1990) indicate Hispanics place greater importance on social aspects of their recreation and on facility development than Anglos. This was not the case for visitors at Imperial Sand Dunes. At that site very few differences in Anglo and Hispanic recreation patterns were found. It should be noted though that the Imperial Sand Dunes is probably not representative of the "typical" BLM recreation site given that it receives very high, concentrated recreation use. The results of the visitor studies on the national forest sites and those obtained at Mecca may generalize to a variety of BLM sites. The sites in these studies varied considerably in elevation, whether or not trees and water were present, and proximity to major urban centers. On the basis of these studies (Mecca Hills included) it seems likely that similar recreation patterns might be found at BLM recreation sites in the Phoenix District (Arizona), and on sites in New Mexico.



## *Conclusions*

To learn more about changing management environments and to address site-specific management issues visitor data were collected at the Mecca Hills recreation area for two seasons beginning in Spring, 1991 and ending in Spring, 1992. Results showed that the character of use at Mecca had changed during the last decade with a greater proportion of Hispanic use occurring at the site. Over the two seasons during which data were collected, results indicated the proportion of Hispanics who visit the area varied. It is recommended that use is monitored on a regular basis to more accurately estimate the proportion of use by these newer visitors. Results revealed differences in recreation patterns among Anglos and Hispanics that were consistent with studies conducted at other recreation sites. These results may generalize to other BLM recreation sites with Anglo and Hispanic visitors but more research is needed to confirm this.

### Recommendations for Future Research

Future research on Mecca Hills visitors should address several questions. What is the ethnic mix of “typical” visitors at Mecca Hills? Data from the two samples revealed different mixes. For developing service delivery strategies it will be important to determine the ethnic composition of visitors since differences between Anglos and Hispanics suggest two strategies are needed. Research could also focus on some unanswered questions related to the Recreation Area Management Plan. Research could focus on identifying the kinds of information visitors would like displayed at the proposed information kiosks. Research could also examine the question of vandalism. It could attempt to determine how widespread vandalism is and when it is occurring by asking visitors if they have seen acts of depreciative behavior.

Future research on BLM lands should answer the question about how generalizable results from Mecca are to other areas. This could be accomplished by conducting research at sites similar to Mecca, or could incorporate site characteristics as a variable, since studies of Anglo and Hispanic differences appear constant across site type.





## *Citations and Relevant Literature*

- Baas, J.M., and D.J. Chavez. 1991. Visitor Research Pilot Study at Mecca Hills for Data Collected During Spring, 1991. Final Report submitted to Bureau of Land Management, Sacramento, CA., 33 pp.
- Baas, J.M., and D.J. Chavez. 1991. Ethnic Differences in Recreation Preferences for National Forest Sites among Anglo and Hispanic Visitors. Manuscript submitted to Leisure Sciences.
- Eslinger, D. 1991. Draft Management Plan for the Mecca Hills Recreation Area. USDI Bureau of Land Management, Palm Springs, Ca. 81 pp.
- Gramann, J. H., and M. F. Floyd. 1991. Ethnic Assimilation and Recreational Use of the Tonto National Forest. Final Report submitted to Pacific Southwest Research Station, Riverside, CA., 97 pp.
- Irwin, P.N., W.C. Gartner, and C.C. Phelps. 1990. Mexican-American Anglo Cultural Differences as Recreation Style Determinants. Leisure Sciences, 12: 335-348.
- Laidlaw, R. 1991. Diversity and Changing Land Use in California. California Parks and Recreation, (Spring edition): 29-31.
- Lee, M.E., and P.J. Brown. 1991. An Analysis, Interpretation, and Report of Recreational User Data Collected on the Inyo National Forest during Summer 1989. Final Report submitted to the PSW Research Station, Riverside, CA., 87 pp.
- SAS (Statistical Analysis System), Inc. 1985. Users Guide. Version 5 Edition, Cary, NC: SAS Institute, Inc.
- Simcox, D.E., and R.E. Pfister. 1990. Hispanic Values and Behaviors Related to Outdoor Recreation and the Forest Environment. Technical Research Report. Pacific Southwest Research Station, Riverside, Ca. 117 pp.





*Appendix A Follows:*

Phase I Questionnaire in English

Phase I Questionnaire in Spanish

Phase II Questionnaire in English

Phase II Questionnaire in Spanish





Welcome to the Mecca Hills Recreation Area. To help us better meet your recreation needs please take a few minutes to complete this questionnaire. Your answers will be confidential and anonymous. Please keep in mind that your participation, while voluntary, is considered extremely important. Thank you.

1. **HOW IMPORTANT** are the following items for your visit to this site?

(Indicate your response by circling one of the five numbers appearing after each topic.)

	<u>Not</u> <u>Important</u>	<u>Little</u> <u>Importance</u>	<u>Somewhat</u> <u>Important</u>	<u>Important</u>	<u>Very</u> <u>Important</u>
A safe area	1	2	3	4	5
A clean, non-littered area	1	2	3	4	5
A beautiful area	1	2	3	4	5
To have a place to recreate with my family	1	2	3	4	5
A place relatively free of rules and regulations	1	2	3	4	5
A place easy to get to	1	2	3	4	5
A place with friendly, informative rangers	1	2	3	4	5
A place in which I can use my equipment	1	2	3	4	5
A place with adequate and well-cared for facilities	1	2	3	4	5
Parking spaces	1	2	3	4	5
Signs	1	2	3	4	5
Picnic areas	1	2	3	4	5
Trails	1	2	3	4	5
Garbage Disposal	1	2	3	4	5
Law enforcement	1	2	3	4	5
Toilets	1	2	3	4	5
A low-cost recreational area	1	2	3	4	5





2. How did you hear or learn about this area? (Please check)

- ☐ TV
- ☐ Newspaper
- ☐ Radio
- ☐ Word of mouth
- ☐ Brochures, flyers
- ☐ Agency
- ☐ Other(specify) \_\_\_\_\_

3. If you wanted to find out information concerning this area what would you use?(Please check )

- ☐ TV
- ☐ Newspaper
- ☐ Radio
- ☐ Word of mouth
- ☐ Brochures, flyers
- ☐ Agency
- ☐ Other(specify) \_\_\_\_\_

4. Where did you learn to care for the Land? Please **RANK ORDER** with 1 being most important, 2 being next most important and so on.)

- |   |  |
|---|--|
| <input type="checkbox"/> Church               | <input type="checkbox"/> Friends               |
| <input type="checkbox"/> Government Officials | <input type="checkbox"/> Government officials  |
| <input type="checkbox"/> Family               | <input type="checkbox"/> TV/Radio/Movies       |
| <input type="checkbox"/> Literature           | <input type="checkbox"/> Other (specify) _____ |

5. List five activities that you like to do here.

Rank

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |

Now, please **RANK THOSE ACTIVITIES** by placing a 1 by the most important, 2 by the next most important and so on.

6. List up to five things that should be done to this area to make your recreational outing more enjoyable.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_



7. **HOW WELL SATISFIED** are you with the following items at this site?  
 (Indicate your response by circling one of the five numbers appearing after each topic.)

	Not Satisfied <u>At All</u>	Little <u>Satisfaction</u>	Somewhat <u>Satisfied</u>	<u>Satisfied</u>	Very Well <u>Satisfied</u>
A safe area	1	2	3	4	5
A clean, non-littered area	1	2	3	4	5
A beautiful area	1	2	3	4	5
To have a place to recreate with my family	1	2	3	4	5
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A place with adequate and well-cared for facilities	1	2	3	4	5
Parking spaces	1	2	3	4	5
Signs	1	2	3	4	5
Picnic areas	1	2	3	4	5
Trails	1	2	3	4	5
Garbage Disposal	1	2	3	4	5
Law enforcement	1	2	3	4	5
Toilets	1	2	3	4	5
A low-cost recreational area	1	2	3	4	5





8. What language(s) do you speak?  
☐ Spanish ☐ English ☐ Other(specify)\_\_\_\_\_ (Please Check)

9. What is your age? \_\_\_\_\_

10. Gender: ☐ male ☐ female (Please Check)

11. What cultural group do you prefer to have others think of you as? (Please Check)

☐ Anglo American ☐ Chinese American  
☐ Black American ☐ Asian American  
☐ Mexican American ☐ Central American  
☐ Hispanic American ☐ Other(specify)\_\_\_\_\_

12. What was your last year of school? (Please circle a number)

Elementary  
School  
1 2 3 4 5 6

Middle  
School  
7 8

High  
School  
9 10 11 12

College  
13 14 15 16

Graduate  
School  
17 18 19 20

13. Place of birth (state and country)\_\_\_\_\_

14. Who manages this area? (please check)

☐ Private  
☐ Park Service  
☐ Forest Service  
☐ Bureau of Land Management  
☐ County  
☐ Unmanaged by anyone  
☐ Unknown

15. How often do you see rangers in this area? (Please Check)

☐ Never ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

16. In what way have you dealt with area rangers? (Please Check)

☐ Information ☐ Interpretation/Nature Talks  
☐ Law Enforcement ☐ Assistance  
☐ Other(specific)\_\_\_\_\_

17. Comments: (Please provide any personal remarks)

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Bienvenido a el área recreacional de Mecca Hills. Para ayudarnos a mejorar sus necesidades recreativas, por favor tome unos minutos para completar este cuestionario anonimos. Por favor tenga en mente que aunque su participacion en este cuestionario es voluntaria, es considerada muy importante. Gracias.

1.¿ **QUE TAN IMPORTANTE** son los siguientes elementos para su visita a esta área? (Por favor, indique su respuesta con un círculo en uno de los cinco números que siga cada asunto.)

	No es <u>importante</u>	Poco <u>Importancia</u>	Mas or Menos <u>Importante</u>	<u>Importante</u>	Muy <u>Importante</u>
Una area segura	1	2	3	4	5
Una area limpia	1	2	3	4	5
Una area bonita	1	2	3	4	5
Tener un lugar para recreacionar con mi familia	1	2	3	4	5
Un lugar relativamente libre de reglas y reglamentos	1	2	3	4	5
Un lugar facil de llegar	1	2	3	4	5
Un lugar con guardabosques amistosos y que den informacion	1	2	3	4	5
Un lugar donde yo pueda usar mi equipo	1	2	3	4	5
Un lugar con instalaciones adecuadas y bien cuidadas	1	2	3	4	5
Estacionamientos	1	2	3	4	5
Señales	1	2	3	4	5
Areas para comer	1	2	3	4	5
Caminos/Brechas	1	2	3	4	5
Basureros	1	2	3	4	5
Se mantenga La Ley	1	2	3	4	5
Sanitarios/Baños	1	2	3	4	5
Bajo Costo	1	2	3	4	5





2. ¿ Como supo o escucho de esta área? (Favor de indicar )

2

- ☐ T.V.
- ☐ Periodico
- ☐ Radio
- ☐ Por otras personas
- ☐ Folletos, Anuncios
- ☐ Agencia
- ☐ Otro (Especifique) \_\_\_\_\_

3. ¿Si Usted quieiera obtener mas informacion sobre esta área, que usaria? (Favor de indicar)

- ☐ T.V.
- ☐ Periodico
- ☐ Radio
- ☐ Por otras personas
- ☐ Folletos, Anuncios
- ☐ Agencia
- ☐ Otro (Especifique) \_\_\_\_\_

4. ¿ A donde aprendio a cuidar de la tierra? (Por favor **NUMERE EN ORDEN DECENDIENTE**)

- ☐ Iglesia
- ☐ Oficiales del governo
- ☐ Familia
- ☐ Libros/Revistas
- ☐ Amigos
- ☐ T.V./Radio/Cine
- ☐ Otro (Especifique) \_\_\_\_\_

5. Escriba cinco actividades que le guste hacer aqui:

Rango  
(Importancia)

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |

Ahora, por favor **NUMERE ESTAS ACTIVIDADES** colocando un 1 a las mas importante, 2 a las siguiente mas importante, etc.

6. Escriba cinco cosas que se deben hacer en esta area para que Usted disfrute mas su recreacion al aire libre.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_



7. **¿QUE TAN BIEN ESTÁ USTED SATISFECHO** con los siguientes elementos en este lugar? (Por favor, indique su repuesta con un círculo en uno de los cinco números que sigue cada asunto.)

	No satisfecho <u>en absoluto</u>	Poco <u>Satisfecho</u>	Mas or Menos <u>satisfecho</u>	<u>Satisfecho</u>	Muy <u>satisfecho</u>
Una area segura	1	2	3	4	5
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Se mantenga La Ley	1	2	3	4	5
Sanitarios/Baños	1	2	3	4	5
Bajo Costo	1	2	3	4	5





8. ¿Que idioma(s) habla Usted? (Favor de indicar)

4

\_\_\_\_\_ Español \_\_\_\_\_ Ingles \_\_\_\_\_ Otro (especifique)

9. ¿Cual es su edad? \_\_\_\_\_

10. Sexo: \_\_\_\_\_ Hombre \_\_\_\_\_ Mujer (Favor de indicar)

11. ¿Con que grupo cultural se identifica Usted? (Favor de indicar)

_____ Anglo Americano	_____ Chino Americano
_____ Afro Americano	_____ Asiatico Americano
_____ Mexicano Americano	_____ Centro Americano
_____ Hispano Americano	_____ Otro (Especifique) _____
_____ Chino Americano	

12. ¿Cual fue su ultimo año de escuela? (Favor de circular un numero)

<u>PRIMARIA</u>						<u>SECUNDARIA</u>			<u>PREPARATORIA</u>			<u>UNIVERSIDAD</u>				<u>ESTUDIO DE POSGRADO</u>			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

13. Lugar de nacimiento (Estado y Pais) \_\_\_\_\_

14. ¿Quien es el encargado de esta area? (Favor de indicar)

\_\_\_\_\_ Propiedad Privada  
\_\_\_\_\_ Servicio de Parques  
\_\_\_\_\_ Servicio de Bosques  
\_\_\_\_\_ Agencia de Manejo de la propiedad  
\_\_\_\_\_ Condado  
\_\_\_\_\_ Sin Encargado  
\_\_\_\_\_ No Se

15. ¿Que tan seguido ve a guardabosques en esta area? (Favor de indicar)

\_\_\_\_\_ Nunca \_\_\_\_\_ Raramente \_\_\_\_\_ Algunas Veces \_\_\_\_\_ Frecuentemente \_\_\_\_\_ Siempre

16. ¿Cual ha sido su relacion con el guardabosques de esta area?

_____ Informacion	_____ Interpretacion/actividades de la naturaleza
_____ Mantener la ley	_____ Otra (Especifique) _____
_____ Ayuda	

¿ ¿

17. Comentarios: Hay algo mas que Usted piense que nosotros debemos saber?

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**MUCHAS GRACIAS POR SU COOPERACIÓN CON ESTA ENCUESTA**



Welcome to the Mecca Hills Recreation Area. To help us better meet your recreation needs please take a few minutes to complete this questionnaire. Your answers will be confidential and anonymous. Please keep in mind that your participation, while voluntary, is considered extremely important. Thank you.

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	<u>Not Important</u>	<u>Little Importance</u>	<u>Somewhat Important</u>	<u>Important</u>	<u>Very Important</u>
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Law enforcement	1	2	3	4	5
Toilets	1	2	3	4	5
A low-cost recreational area	1	2	3	4	5



2. How did you hear or learn about this area? (Please check the one response that best applies)

- ☐ TV
- ☐ Newspaper
- ☐ Radio
- ☐ Word of mouth
- ☐ Brochures, flyers
- ☐ Agency
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3. If you wanted to find out information concerning this area what would you use?(Please check the one response that best applies)

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- ☐ Brochures, flyers
- ☐ Agency
- ☐ Other(specify) \_\_\_\_\_

4. Where did you learn to care for the Land? Please **RANK ORDER** with 1 being most important, 2 being next most important and so on.)

- |   |  |
|---|--|
| <input type="checkbox"/> Church               | <input type="checkbox"/> Friends               |
| <input type="checkbox"/> Government Officials | <input type="checkbox"/> Government officials  |
| <input type="checkbox"/> Family               | <input type="checkbox"/> TV/Radio/Movies       |
| <input type="checkbox"/> Literature           | <input type="checkbox"/> Other (specify) _____ |

5. Please indicate whether or not you engage in the following activities here.

	YES	NO	RANK
Picnicking	_____	_____	_____
Ride motorcycles/OHV's	_____	_____	_____
Hiking or walking	_____	_____	_____
Camping	_____	_____	_____
Group sports (eg volleyball, baseball)	_____	_____	_____
Photography	_____	_____	_____
Horseback riding	_____	_____	_____
Relaxing	_____	_____	_____
Studying geology of the area	_____	_____	_____
Visiting with family or friends	_____	_____	_____

6. List up to five things that should be done to this area to make your recreational outing more enjoyable.

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_





7. **HOW WELL SATISFIED** are you with the following items at this site?  
(Indicate your response by circling one of the five numbers appearing after each topic.)

	Not Satisfied <u>At All</u>	Little <u>Satisfaction</u>	Somewhat <u>Satisfied</u>	<u>Satisfied</u>	Very Well <u>Satisfied</u>
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A beautiful area	1	2	3	4	5
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Trails	1	2	3	4	5
Garbage Disposal	1	2	3	4	5
Law enforcement	1	2	3	4	5
Toilets	1	2	3	4	5
A low-cost recreational area	1	2	3	4	5



8. What language(s) do you speak?  
☐ Spanish    ☐ English    ☐ Other(specify)\_\_\_\_\_ (Please Check)

9. What is your age? \_\_\_\_\_

10. Gender:    ☐ male    ☐ female (Please Check)

11. What cultural group do you prefer to have others think of you as? (Please Check)

☐ Anglo American            ☐ Chinese American  
☐ Black American            ☐ Asian American  
☐ Mexican American        ☐ Central American  
☐ Hispanic American        ☐ Other(specify)\_\_\_\_\_

12. What was your last year of school? (Please circle a number)

Elementary <u>School</u>	Middle <u>School</u>	High <u>School</u>	<u>College</u>	Graduate <u>School</u>
1 2 3 4 5 6	7 8	9 10 11 12	13 14 15 16	17 18 19 20

13. Place of birth (state and country)\_\_\_\_\_

14. Who manages this area? (please check)

☐ Private  
☐ Park Service  
☐ Forest Service  
☐ Bureau of Land Management  
☐ County  
☐ Unmanaged by anyone  
☐ Unknown

15. How often do you see rangers in this area? (Please Check)

☐ Never    ☐ Seldom    ☐ Sometimes    ☐ Often    ☐ Always

16. In what way have you dealt with area rangers? (Please Check)

☐ Information            ☐ Interpretation/Nature Talks  
☐ Law Enforcement    ☐ Assistance  
☐ Other(specific)\_\_\_\_\_

17. What is the ZIP code of your home residence? \_\_\_\_\_

18. Comments: (Please provide any personal remarks)

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Bienvenido a el área recreacional de Mecca Hills. Para ayudarnos a mejorar sus necesidades recreativas, por favor tome unos minutos para completar este cuestionario anonimos. Por favor tenga en mente que aunque su participacion en este cuestionario es voluntaria, es considerada muy importante. Gracias.

- 1.¿ **QUE TAN IMPORTANTE** son los siguientes elementos para su visita a esta área? (Por favor, indique su respuesta con un círculo en uno de los cinco números que siga cada asunto.)

	<u>No es importante</u>	<u>Poco Importancia</u>	<u>Mas or Menos importante</u>	<u>Importante</u>	<u>Muy Importante</u>
Una area segura	1	2	3	4	5
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Basureros	1	2	3	4	5
Se mantenga La Ley	1	2	3	4	5
Sanitarios/Baños	1	2	3	4	5
Bajo Costo	1	2	3	4	5



2. ¿ Como supo o escucho de esta área? (Favor indique la mejor respuesta que aplique) 2

- ☐ T.V.  
☐ Periodico  
☐ Radio  
☐ Por otras personas  
☐ Folletos, Anuncios  
☐ Agencia  
☐ Otro (Especifique) \_\_\_\_\_

3. ¿ Si Usted quieiera obtener mas informacion sobre esta área, que usaria? (Favor indique la mejor respuesta que aplique)

- ☐ T.V. ☐ Folletos, Anuncios  
☐ Periodico ☐ Agencia  
☐ Radio ☐ Otro (Especifique) \_\_\_\_\_  
☐ Por otras personas

4. ¿ A donde aprendio a cuidar de la tierra? (Por favor **NUMERE EN ORDEN DECENDIENTE**)

- ☐ Iglesia ☐ Amigos  
☐ Oficiales del governo ☐ T.V./Radio/Cine  
☐ Familia ☐ Otro (Especifique) \_\_\_\_\_  
☐ Libros/Revistas

5. Favor de indicar si toma parte o no en las siguientes actividades:

	SÍ	NO	ORDEN DECENDIENTE
Día de campo	_____	_____	_____
Andar en motocicleta	_____	_____	_____
Caminor O dar una caminata en las montañas	_____	_____	_____
Acampar	_____	_____	_____
Practicar deportes en grupo (volibol, beisbol, etc)	_____	_____	_____
Fotografía	_____	_____	_____
Montar a caballo	_____	_____	_____
Relajarse	_____	_____	_____
Hacer estudios geologicos del área	_____	_____	_____
Visitar con familia y/o amigos	_____	_____	_____

Ahora, favor de poner en orden de importancia SOLO LAS ACTIVIDADES EN QUE PARTICIPA, por ejemplo: 1 al lado de la mas importante, 2 al lado de la segunda importanica, etc.

6. Escriba cinco cosas que se deben hacer en esta area para que Usted disfrute mas su recreacion al aire libre.

1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_  
5. \_\_\_\_\_



7. **¿QUE TAN BIEN ESTÁ USTED SATISFECHO** con los siguientes elementos en este lugar? (Por favor, indique su repuesta con un círculo en uno de los cinco números que sigue cada asunto.)

	No satisfecho <u>en absoluto</u>	Poco <u>Satisfecho</u>	Mas or Menos <u>satisfecho</u>	<u>Satisfecho</u>	Muy <u>satisfecho</u>
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Sanitarios/Baños	1	2	3	4	5
Bajo Costo	1	2	3	4	5





8. ¿Que idioma(s) habla Usted? (Favor de indicar)

\_\_\_\_\_ Español \_\_\_\_\_ Ingles \_\_\_\_\_ Otro (especifique)

9. ¿Cual es su edad? \_\_\_\_\_

10. Sexo: \_\_\_\_\_ Hombre \_\_\_\_\_ Mujer (Favor de indicar)

11. ¿Con que grupo cultural se identifica Usted? (Favor de indicar)

_____ Anglo Americano	_____ Chino Americano
_____ Afro Americano	_____ Asiatico Americano
_____ Mexicano Americano	_____ Centro Americano
_____ Hispano Americano	_____ Otro (Especifique) _____
_____ Chino Americano	

12. ¿Cual fue su ultimo año de escuela? (Favor de circular un numero)

<u>PRIMARIA</u>					<u>SECUNDARIA</u>			<u>PREPARATORIA</u>			<u>UNIVERSIDAD</u>				<u>ESTUDIO DE POSGRADO</u>				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

13. Lugar de nacimiento (Estado y Pais) \_\_\_\_\_

14. ¿Quien es el encargado de esta area? (Favor de indicar)

\_\_\_ Propiedad Privada  
 \_\_\_ Servicio de Parques  
 \_\_\_ Servicio de Bosques  
 \_\_\_ Agencia de Manejo de la propiedad  
 \_\_\_ Condado  
 \_\_\_ Sin Encargado  
 \_\_\_ No Se

15. ¿ Que tan seguido ve a guardabosques en esta area? (Favor de indicar)

\_\_\_ Nunca \_\_\_ Raramente \_\_\_ Algunas Veces \_\_\_ Frecuentemente \_\_\_ Siempre

16. ¿Cual ha sido su relacion con el guardabosques de esta area?

\_\_\_ Informacion  
 \_\_\_ Mantener la ley  
 \_\_\_ Ayuda  
 \_\_\_ Interpretacion/actividades de la naturaleza  
 \_\_\_ Otra (Especifique) \_\_\_\_\_

17. ¿Qué es el código postal de su residencia? \_\_\_\_\_

18. Comentarios: ¿Hay algo mas que Usted piense que nosotros debemos saber?

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**MUCHAS GRACIAS POR SU COOPERACIÓN CON ESTA ENCUESTA**



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*[Signature]*

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